

Patent Abstracts of Japan

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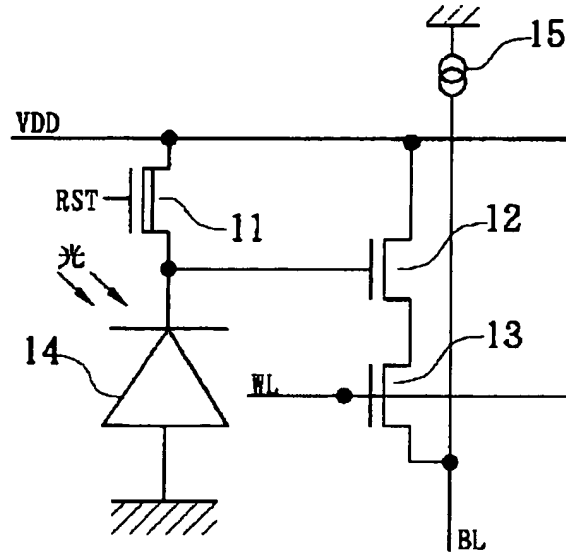
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TITLE : IMAGE SENSOR



ABSTRACT : PROBLEM TO BE SOLVED: To provide an image sensor where a dynamic range of a photoelectric conversion voltage output is wide and a step-down voltage power supply for preventing blooming is not required.

SOLUTION: In the disclosed image sensor, a pixel circuit is configured with a photo diode 14 that generates a photoelectric conversion voltage in response to an input optical level, a transistor(TR) 11 that is activated in response to a reset signal RST to initialize the photo diode 14 by using a power supply VDD, a TR, 12 that is connected between a point of the power supply VDD and a bit line BL, amplifies the photoelectric conversion voltage and outputs the amplified voltage to the bit line BL, and a TR 13 that is activated by a word line read control signal WL to connect the TR 12 to the bit line BL. A depletion TR is adopted for the TR 11. Thus, A dynamic range of the photoelectric conversion voltage output of the pixel can be widened without using a booster power supply to increase an initializing level of a pixel light receiving section.

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